

For discussion - 6/02

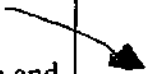


DESIGN CRITERIA DECISIONS

Design Element	Design Criteria
Criteria for removing trees	<ul style="list-style-type: none">➤ > or = 6" caliper – do not remove; excavate to drip line, use vacuum truck to remove top 6" inside drip line, backfill with topsoil➤ < 6 " caliper – remove
Criteria for removing driveways	Only when there is risk of exposure due to deteriorated wearing surface and exposed vermiculite beneath the driveway
Criteria for removing walks	Only when there is risk of exposure due to deteriorated wearing surface and exposed vermiculite beneath the walk
Criteria for removing decks	Only when then deck is off the ground sufficiently to allow a person or pet beneath it; if lattice or other easily removed barrier is present, still remove the deck
Criteria for removing sheds, carports, and other secondary structures	<ul style="list-style-type: none">➤ if permanent foundation, leave in place; don't excavate beneath➤ if skid-mounted, move structure and excavate beneath
Criteria for removing/replacing fences	Remove/replace in kind whenever necessary to excavate contaminated soil
Criteria for removing insulation in walls	Leave in place, but if exposed around a switch or outlet, use foam insulation to seal
Criteria for removing insulation in block walls	Leave in place
Criteria for removing contaminated soils in basements and crawl spaces	<ul style="list-style-type: none">➤ if floor is concrete slab, leave in place➤ if floor is soil, use vacuum truck to remove top 6"; backfill with ag fill
Criteria for removing building materials with visual vermiculite	Only remove if friable (as determined by pre-design investigation team)
Criteria for removing contaminated soils under mobile homes	Support trailer, remove skirt and use vacuum truck to remove soil to 6" deep
Criteria for cleaning (i.e., wet wiping) outside household items (i.e., bikes, lawnmowers, grills) that exist on contaminated soil	Clean household items only if they are in direct contact with soil containing vermiculite; if in contact with grass, move without cleaning
Criteria for cleaning vehicles located in storage structures	Clean if visible vermiculite or if dust samples tested positive
How handle finished attics – demolish everything necessary to get insulation out – walls, ceiling, and floors?	Yes, unless the material is totally contained within an area without access
Collect PLM samples for other ACM, such as chrysotile?	Only if demolishing a suspected ACM
Test for lead-based paint?	Only if demolishing a painted surface
Also, remove other insulation to pass clearance?	Yes

State

<p>Action levels/cleanup criteria</p> <ul style="list-style-type: none"> ➤ Soil – when to excavate; when to stop excavating ➤ Air – perimeter; outside containment; clearance ➤ Dust 	<p>Notes: visual vermiculite will no longer be used as an action level; the following action levels are the ones currently being used and need to be revisited</p> <ul style="list-style-type: none"> ➤ trace; < 1% ➤ ND; ND; 1 structure (both VCI removal and interior cleaning) ➤ 5,000 structures total <p>check with Chris</p>
Sampling protocol for air monitoring – personals; background; perimeter, outside containment; clearance	To be developed
Analytical protocol for soil, air, and dust for various samples	To be determined; current protocol for all media and analytical methods to be reviewed and finalized with EPA for future work
Using topsoil versus ag fill	Use topsoil in top 6" and ag fill below that
Using sod versus seed	Replace in kind
Criteria for replacing flowers (annuals, perennials) and shrubs	Do not replace annual flowers; replace perennials and shrubs in kind
Procure, test, and approve topsoil and ag fill sources <ul style="list-style-type: none"> ➤ Frequency of sampling for topsoil and ag fill 	<p>Volpe procure separately, testing required by supplier, CDM approve (must visit source)</p> <ul style="list-style-type: none"> ➤ Chemical and asbestos analysis every 10,000 cy if virgin material, every 5,000 cy if stockpiled material ➤ Nutrients every 5,000 cy
Collect dust samples on houses with VCI, but no exterior contamination?	Yes
Collect dust samples on houses with exterior contamination but no VCI?	Yes
Collect dust samples on houses with no exterior contamination and no VCI?	Only if there is a "secondary source" issue (e.g. asbestos related disease, mine worker, Grace employee)
Collect dust samples on secondary structures (i.e., detached garages) if exterior contamination exists?	Yes
When complete a survey for properties	Complete survey for all properties with exterior contamination (except when only removal is flower beds or planters immediately adjacent to the house), only in those areas that will be excavated; include property boundary survey for those areas also
When complete a survey after restoration finished	For every property that had a survey prior to excavation
Use misters on fences?	No, unless other houses immediately adjacent to excavation
Visquine on house openings versus entire house	Yes

Utility locates – who does? How?	Removal contractors – must satisfy themselves that they won't encounter utilities
Permits needed?	In general no; if there is a permit required for replacing decks or driveways, the removal contractors will be responsible to obtain
Contractors need licenses from State for asbestos abatement?	No
Where dispose of contaminated soil? Perform cost-benefit analysis?	Mine site, unless need in landfill to balance Yes
Where dispose of VCI?	In landfill
Pay tipping fees at landfill?	Yes
Prepare final data documentation (FDD) files for residents?	Yes
Prepare and maintain residential closeout folders?	Yes
How handle septic systems?	Only if encountered during other remediation, remove vermiculite backfill; removal contractors responsible to ensure their operations don't damage them
Criteria for replacing trees	Replace with a 2 ½ " – 3" tree of the same or similar variety; if replacing a tree with > 12" caliper, replace with 2 trees
Equipment decontamination procedures (wrap versus full decon)	Wrap tracks/wheels if transporting to another removal location
Portable equipment decon facilities?	Yes
Criteria for documenting "remaining contamination" (i.e. inside walls, beneath driveways) <ul style="list-style-type: none"> ➤ Keep in database? ➤ Add to resident consent form? ➤ Letter for remediated properties, with and without asbestos remaining at them? 	Everything remaining will be documented, put in letters and stored in database
How handle substandard electrical in attics when have to remove insulation?	Tell removal contractors to avoid touching; if absolutely necessary to move, will replace circuit and breaker box to meet code
How handle residents who want to remodel their attic and want to maximize the building materials demolished during attic insulation removals?	Design will include only enough demolition to access VCI; removal contractors will be allowed to demolish more at no additional cost to government if it makes their operations more efficient